

What is claimed is:

1. A magnetic core provided so as to be related to at least a part of a magnetic field generation means, wherein a material, in which magnetic particles are arranged in a base material under a dispersed state, is used as a magnetic material acting on an electromagnetic characteristic of a generated magnetic field.

2. A magnetic core according to claim 1, wherein the magnetic particle is at least one of iron powder, ferrite powder, and magnetite powder.

3. A magnetic core according to claim 2, wherein the base material is a solidified hydraulic composition.

4. A magnetic core according to claim 1, wherein the base material is a solidified hydraulic composition.

5. A magnetic core according to claim 4, wherein the hydraulic composition is one of portland cement and a high-density hydrothermal synthetic ceramics precursor.

6. An excitation coil comprising the magnetic core according to claim 1, wherein the magnetic core is placed on the periphery of the coil serving as the magnetic field generation means.

7. A transformer obtained by winding at least two coils at different positions of one magnetic core,

wherein the one magnetic core is the magnetic core according to claim 1.

8. An electric equipment comprising at least a magnetic field generation means, wherein the magnetic core according to claim 1 is provided so as to be related to at least a part of the magnetic field generation means.

9. An electrophotographic apparatus comprising:

an image formation means for forming an unfixed toner image on a surface of a record medium by using electrophotography; and

a fusing means having a fixing rotation body and a pressurizing rotation body disposed to press against the fixing rotation body to define a nip part therebetween, fixing the unfixed toner image on the surface of the record medium by inserting the record medium into the nip part so that the surface on which the unfixed toner image is formed contacts with the fixing rotation body,

wherein a conductive layer is formed in the proximity of a circumferential surface of one of the fixing rotation body and the pressurizing rotation body;

wherein a magnetic field generation means is placed close to

one of the fixing rotation body and the pressurizing rotation body to which the conductive layer is formed; and

wherein the magnetic field generation means has the magnetic core according to claim 1.

10. An electrophotographic apparatus comprising:

an image bearing rotation body;

an image formation means for forming an unfixed toner image on a circumferential surface of the image bearing rotation body by using electrophotography; and

a pressurizing member disposed to face the image bearing rotation body to define a nip part therebetween,

in which a record medium is inserted into the nip part, whereby the unfixed toner image is transferred and fixed onto a surface of the record medium by application of heat and pressure,

wherein a conductive layer is formed in the proximity of the circumferential surface of the image bearing rotation body;

wherein a magnetic field generation means is disposed close to the image bearing rotation body in the nip part and upstream thereof of the image bearing rotation body; and

wherein the magnetic field generation means has the magnetic core according to claim 1.

11. An electrophotographic apparatus comprising:

an image bearing rotation body;

an image formation means for forming an unfixed toner image on a circumferential surface of the image bearing rotation body by using electrophotography;

a heating member disposed in the image bearing rotation body to abut against the image bearing rotation body in the circumference thereof, and provided for heating the image bearing rotation body;

a pressurizing member disposed to face the heating member through the image bearing rotation body to define a nip part with the image bearing rotation body,

in which a record medium is inserted into the nip part, whereby the unfixed toner image is transferred and fixed onto a surface of the record medium by application of heat and pressure,

wherein a conductive layer is formed at least in one of the proximity of the circumferential surface of the image bearing rotation body and the proximity of an abutment part of the heating member against the image bearing rotation body;

wherein when the conductive layer is formed in the image bearing rotation body, a magnetic field generation means is disposed close to the image bearing rotation body in the nip part and upstream thereof of the image bearing member;

wherein when the conductive layer is formed in the heating member, the magnetic field generation means is disposed close to the heating member; and

wherein the magnetic field generation means has the magnetic core according to claim 1.

12. A magnetic field shield member provided on the periphery of a magnetic field generation means for generating a magnetic field and shielding the magnetic field generated by the magnetic field generation means, wherein magnetic particles are arranged in a base material under a dispersed state.

13. A magnetic field shield member according to claim 12, wherein the magnetic particle is at least one of iron powder, ferrite powder, and magnetite powder.

14. A magnetic field shield member according to claim 13, wherein the base material is a solidified hydraulic composition.

15. A magnetic field shield member according to claim 12, wherein the base material is a solidified hydraulic composition.

16. A magnetic field shield member according to claim 15, wherein the hydraulic composition is one of portland cement and a high-density hydrothermal synthetic ceramics precursor.

17. An excitation coil comprising the magnetic field shield

member according to claim 12, wherein the magnetic field shield member is placed on the periphery of the coil serving as the magnetic field generation means.

18. A transformer obtained by winding at least two coils at different positions of one magnetic core,

wherein the magnetic field shield member according to claim 12 is provided on the periphery of at least one of the coils.

19. An electric equipment comprising at least a magnetic field generation means, wherein the magnetic field shield member according to claim 12 is provided on the periphery of the magnetic field generation means.

20. An electrophotographic apparatus comprising:

an image formation means for forming an unfixed toner image on a surface of a record medium by using electrophotography; and

a fusing means having a fixing rotation body and a pressurizing rotation body disposed to abut against the fixing rotation body to define a nip part therebetween, fixing the unfixed toner image on the surface of the record medium by inserting the record medium into the nip part so that the surface on which the unfixed toner image is formed contacts with the fixing rotation body,

wherein a conductive layer is formed in the proximity of a

circumferential surface of one of the fixing rotation body and the pressurizing rotation body;

wherein a magnetic field generation means is placed close to the one of the fixing rotation body and the pressurizing rotation body;

wherein a leakage magnetic field shielding member for shielding at least a part of a leakage magnetic field, which does not affect the conductive layer, of the magnetic field generated from the magnetic field generation means is disposed in the periphery of the magnetic field generation means; and

wherein the magnetic field shield member is the magnetic field shield member according to claim 12.

21. An electrophotographic apparatus comprising:

an image bearing rotation body;

an image formation means for forming an unfixed toner image on a circumferential surface of the image bearing rotation body by using electrophotography; and

a pressurizing member disposed to face the image bearing rotation body to define a nip part therebetween,

in which a record medium is inserted into the nip part, whereby the unfixed toner image is transferred and fixed onto a surface of the record medium by application of heat and pressure,

a magnetic field generation means for generating a magnetic

field;

wherein a conductive layer is formed in the proximity of the circumferential surface of the image bearing rotation body;

wherein a magnetic field generation means is disposed close to the image bearing rotation body in the nip part and upstream thereof of the image bearing rotation body;

wherein a leakage magnetic field shielding member for shielding at least a part of a leakage magnetic field, which does not affect the conductive layer, of the magnetic field generated from the magnetic field generation means is disposed in the periphery of the magnetic field shield member; and

wherein the magnetic field shield member is the magnetic field shield member according to claim 12.

22. An electrophotographic apparatus comprising:

an image bearing rotation body;

an image formation means for forming an unfixed toner image on a circumferential surface of the image bearing rotation body by using electrophotography;

a heating member disposed in the image bearing rotation body to abut against the image bearing rotation body in the circumference thereof, and provided for heating the image bearing rotation body; and

a pressurizing member disposed to face the heating member



through the image bearing rotation body to define a nip part with the image bearing rotation body,

in which a record medium is inserted into the nip part, whereby the unfixed toner image is transferred and fixed onto a surface of the record medium by heat and pressure,

wherein a conductive layer is formed at least in one of the proximity of the circumferential surface of the image bearing rotation body and the proximity of the abutment part of the heating member against the image bearing rotation body;

wherein when the conductive layer is formed in the image bearing rotation body, the magnetic field generation means is disposed close to the image bearing rotation body in the nip part and upstream thereof of the image bearing member;

wherein when the conductive layer is formed in the heating member, the magnetic field generation means is disposed close to the heating means;

wherein a leakage magnetic field shielding member for shielding at least a part of a leakage magnetic field, which does not affect the conductive layer, of the magnetic field generated from the magnetic field generation means is disposed in the periphery of the magnetic field generation means; and

wherein the magnetic field shielding member is the magnetic field shielding member according to claim 12.